

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/291,894DATE: 04/28/1999
TIME: 08:47:55

Input Set: I291894.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

ENTERED

1 <110> APPLICANT: Collins, Peter L.
2 Murphy, Brian R.
3 Whitehead, Stephen S.
4 <120> TITLE OF INVENTION: PRODUCTION OF ATTENUATED CHIMERIC RESPIRATORY SYNCYTIAL
5 VIRUS VACCINES FROM CLONED NUCLEOTIDE SEQUENCES
6 <130> FILE REFERENCE: 17634-5-2
7 <140> CURRENT APPLICATION NUMBER: US/09/291,894
8 <141> CURRENT FILING DATE: 1999-04-13
9 <150> EARLIER APPLICATION NUMBER: US 08/892,403
10 <151> EARLIER FILING DATE: 1997-07-15
11 <150> EARLIER APPLICATION NUMBER: US 60/047,634
12 <151> EARLIER FILING DATE: 1997-05-23
13 <150> EARLIER APPLICATION NUMBER: US 60/046,141
14 <151> EARLIER FILING DATE: 1997-05-09
15 <150> EARLIER APPLICATION NUMBER: US 60/021,773
16 <151> EARLIER FILING DATE: 1996-07-15
17 <160> NUMBER OF SEQ ID NOS: 21
18 <170> SOFTWARE: PatentIn Ver. 2.0
19 <210> SEQ ID NO 1
20 <211> LENGTH: 15223
21 <212> TYPE: DNA
22 <213> ORGANISM: respiratory syncytial virus
23 <400> SEQUENCE: 1
24 acgcgaaaaa atgcgtacaa caaacttgca taaaacaaaa aaatggggca aataagaatt 60
25 tgataagtac cacttaaatt taactccctt ggttagagat gggcagcaat tcattgagta 120
26 tgataaaaagt tagattacaa aatttggttt acaatgatga agtagcattt taaaaataaa 180
27 catgctatac tgataaaatta atacattaa ctaatgcttt ggctaaggca gtgatacata 240
28 caatcaaatt gaatggcatt gtgttgtgc atgttattac aagtagtgtat atttgcccta 300
29 ataataaat tgttagaaaa tccaatttca caacaatgcc agtactacaa aatggagggtt 360
30 atatatggaa aatgatggaa ttaacacatt gctctcaacc taatggctta ctagatgaca 420
31 attgtgaaat taaattctcc aaaactaa gtgattcaac aatgaccaat tatataatc 480
32 aattatctga attacttggaa ttgtatctta atccataaat tataattaat atcaactagc 540
33 aaatcaatgt cactaacacc attagttat ataaaaacttta acagaagaca aaaatggggc 600
34 aaataaaatca attcagccaa cccaaaccatg gacacaaccc acaatgataa tacaccacaa 660
35 agactgtatca tcacagacat gagaccgtt tcacttgaga ccataataac atcactaacc 720
36 agagacatca taacacacaa atttatatac ttgataaattc atgaatgcat agtgagaaaa 780
37 ctgtatgaaa agcaggccac atttacattt ctggtcaact atgaaatgaa actattacac 840
38 aaagttagaa gcactaaata taaaaatatac actgaataca acacaaaata tggcactttc 900
39 cctatgccaa tattcatcaa tcattgtgg ttcttagaat gcattggcat taagcctaca 960
40 aagcataactc ccataatata caagtatgtat ctcataatccat aaatttcaac acaatattca 1020
41 cacaatctaa aacaacaact ctatgtatca ctataactcca tagtccagat ggagcctgaa 1080
42 aattataatgtat attaaaaacttta taaggagaga tataagatag aagatggggc aaatacaacc 1140
43 atggcttta gcaagtcaa gttgaatgtatca actcaaca aagatcaact tctgtcatcc 1200
44 agcaaataca ccatccaacg gaggcacagga gatagtattt atactcctaa ttatgtatgtg 1260

PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/291,894DATE: 04/28/1999
TIME: 08:47:55

Input Set: I291894.RAW

45 cagaaacaca tcaataagtt atgtggcatg ttattatca cagaagatgc taatcataaa 1320
46 ttcactgggt taataggtat gtttatatgcg atgtcttaggt taggaagaga agacaccata 1380
47 aaaatactca gagatgcggg atatcatgtaa aagcaaatg gagtagatgt aacaacacat 1440
48 cgtcaagaca ttaatggaaa agaaatgaaa tttgaagtgt taacattggc aagcttaaca 1500
49 actgaaattc aaatcaacat tgagatagaa tctagaaaaat cctacaaaaa aatgctaaaa 1560
50 gaaatgggag aggtagctcc agaatacagg catgactctc ctgattgtgg gatgataata 1620
51 ttatgtatag cagcattagt aataactaaa tttagcagcag gggacagatc tggcttaca 1680
52 gccgtgatta ggagagctaa taatgtccta aaaaatgaaa taaaaacgtta caaaggctta 1740
53 ctacccaagg acatagccaa cagcttctat gaagtgtttg aaaaacatcc ccactttata 1800
54 gatgttttg ttcattttgg tatagcacaa tcttctacca gaggtggcag tagagttgaa 1860
55 gggatttttgg caggattgtt tatgaatgcc tatgggtcag ggcaagtgtat gttacgggtt 1920
56 ggagtcttag caaaatcagt taaaaatatt atgtttaggac atgctagtgt gcaaggcagaa 1980
57 atggaacaag ttgttgaggt ttatgaatatt gcccäääat tgggtggta agcaggattc 2040
58 taccatatat tgaacaaccc aaaagcatca ttattatctt tgactcaatt tcctcacttc 2100
59 tccagtgttag tattaggcaa tgctgctggc cttaggcataa tgggagagta cagaggtaca 2160
60 ccgaggaatc aagatctata tgatgcagca aaggcatatg ctgaaacaact caaagaaaaat 2220
61 ggtgtgatta actacagtgt actagacttg acagcagaag aactagaggc tatcaaacat 2280
62 cagcttaatc caaaagataa tgatgttagag ctttgagtta ataaaaaatg gggcaaataa 2340
63 atcatcatgg aaaagttgc tcctgaattc catggagaag atgcaaacaa cagggctact 2400
64 aaattccctag aatcaataaa gggcaaattc acatcacccaa aagatcccaa gaaaaaagat 2460
65 agtatcatat ctgtcaactc aatagatata gaagtaacca aagaaagccc tataacatca 2520
66 aattcaacta ttatcaaccc aacaaatgag acagatgata ctgcaggaa caagcccaat 2580
67 tatcaaagaa aacctctagt aagttcaaa gaagacccta caccaagtga taatcccttt 2640
68 tctaaactat acaaagaaac catagaaaaca tttgataaca atgaaagaatc atccagctat 2700
69 tcatacgaag aaataaatga tcagacaaac gataatataa cagcaagatt agataggatt 2760
70 gataaaaat taagtgaat actaggaatg cttcacacat tagtagtggc aagtgcagga 2820
71 cctacatctg ctcggatgg tataagagat gccatgggtt gttaagaga agaaaatgata 2880
72 gaaaaaatca gaactgaagc attaatgacc aatgacagat tagaaagctat ggcaagactc 2940
73 aggaatgagg aaagtgaaaa gatggcaaaa gacacatca atgaaatgtc tctcaatcca 3000
74 acatcagaga aattgaacaa cctattggaa gggaatgata gtgacaatga tctatcacct 3060
75 gaagatttct gattagttac caatcttcac atcaacacac aataccaaca gaagaccaac 3120
76 aaactaacca acccaatcat ccaacccaaac atccatccgc caatcagcca aacagccaa 3180
77 aaaacaacca gccaatccaa aactaaccac cccggaaaaaa tctataatat agttacaaa 3240
78 aaaggaaaagg gtggggcaaa tatggaaaca tacgtgaaca agcttcacga aggctccaca 3300
79 tacacagctg ctgttcaata caatgtctt aaaaaagacg atgaccctgc atcacttaca 3360
80 atatgggtgc ccatgttcca atcatctatg ccagcagatt tacttataaa agaactagct 3420
81 aatgtcaaca tactagtgaa acaaataatcc acacccaaagg gaccttcact aagagtcatg 3480
82 ataaaactcaa gaagtgcagt gctagcacaa atgcccagca aatttaccat atgcgcta 3540
83 gtgtccttgg atgaaagaag ccaaactagca tatgatgtaa ccacaccctg tggaaatcaag 3600
84 gcatgtatc taacatgcct aaaatcaaaa aatatgttgc ctacagttaa agatctca 3660
85 atgaaagacac tcaaccctac acatgatatt attgctttat gtgaatttga aaacatagta 3720
86 acatcaaaaaa aagtcatata accaacatac ctaagatcca tcagtgctcag aataaaagat 3780
87 ctgaacacac ttgaaaatat aacaaccact gaattcaaaa atgctatcac aatgcaaaa 3840
88 atcatccctt actcaggatt actattagtc atcacagtga ctgacaacaa aggagcattc 3900
89 aaatacataa agccacaaag tcaattcata gttagatcttgg gagcttacatc agaaaaaagaa 3960
90 agtatatatatt atgttaccac aaattgaaag cacacagctc cacgatttgc aatcaaaccc 4020
91 atgaaagatt aaccccttcc ctctacatca gtgtgttaat tcataaaac tttctaccta 4080
92 cattcttccac ttcaccatca caatcacaaa cactctgtgg ttcaaccaat caaacaaaac 4140
93 ttatctgaag tcccaagatca tcccaagtc ttgttataca gatcttagtac tcaaataagt 4200
94 taataaaaaa tatacacatg gggcaaataa tcattggagg aaatccaact aatcacaata 4260

PAGE: 3

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/291,894DATE: 04/28/1999
TIME: 08:47:55

Input Set: I291894.RAW

95 tctgttaaca tagacaagtc cacacaccat acagaatcaa ccaatggaaa atacatccat 4320
96 aacaatagaa ttctcaagca aattctggcc ttactttaca ctaatacaca tgatcacaac 4380
97 aataatctct ttgctaatca taatctccat catgattgca atactaaaca aactttgtga 4440
98 atataacgta ttccataaca aaaccttga gttaccaaga gctcgagtca acacatagca 4500
99 ttcatcaatc caacagccc aaacagtaac cttgcattt aaaatgaaca accccctacct 4560
100 cttaacaaca cctcattaac atccccaccat gcaaaccact atccatacta taaagtagtt 4620
101 aattaaaaat agtcataaca atgaactagg atatcaagac taacaataac attggggcaa 4680
102 atgcaacaat gtccaaaaac aaggaccaac gcaccgctaa gacattagaa aggacctggg 4740
103 acactctcaa tcatttatta ttcatatcat cgtgcttata taagttaaat cttaaatctg 4800
104 tagcacaaat cacattatcc attctggcaa tgataatctc aacttcactt ataattgcag 4860
105 ccatcatatt catagcctcg gcaaaccaca aagtcacacc aacaactgca atcataacaag 4920
106 atgcaacaag ccagatcaag aacacaaccc caacataacct caccagaat cctcagcttg 4980
107 gaatcagtcc ctctaattcg tctgaaattt catcacaat caccaccata ctagttcaa 5040
108 caacaccagg agtcaagtca accctgcaat ccacaacagt caagacccaaa aacacaacaa 5100
109 caactcaaac acaacccagc aagccacca caaaacaacg cccaaacaaa ccaccaagca 5160
110 aacccaataa tgatttcac tttgaagtgt tcaactttgt accctgcagc atatgcagca 5220
111 acaatccaac ctgctgggct atctgcaaaa gaataccaaa caaaaaacca gaaaagaaaa 5280
112 ccactaccaa gcccacaaaa aaaccaaccc tcaagacaaac caaaaaagat cccaaaccc 5340
113 aaaccactaa atcaaaggaa gtacccacca ccaagcccac agaagagcca accatcaaca 5400
114 ccaccaaaac aaacatcata actacactac tcacctccaa caccacagga aatccagaac 5460
115 tcacaagtca aatggaaacc ttccactcaa ctccctccga aggcaatcca agcccttctc 5520
116 aagtctctac aacatccgag tacccatcac aaccttcattc tccacccaaac acaccacgcc 5580
117 agtagttact taaaacata ttatcacaat aggcccttgac caactaaac agaatcaaaa 5640
118 taaactctgg ggcaaataac aatggagttg ctaatcctca aagcaaatgc aattaccaca 5700
119 atccctactg cagtcacatt ttgtttgct tctggtaaaa acatcactga agaattttat 5760
120 caatcaacat gcagtgcagt tagcaaaggc tatcttagtg ctctgagaac tggttggtat 5820
121 accagtgtta taactataga attaagtaat atcaagaaaa ataagtgtaa tggAACAGAT 5880
122 gctaaggtaa aattgataaa acaagaatta gataaaatata aaaatgctgt aacagaattg 5940
123 cagttgcetca tgcaaagcac acaagcaaca aacaatcgag ccagaagaga actaccaagg 6000
124 tttatgaatt atacactcaa caatgccaataaaaccaatg taacattaag caagaaaagg 6060
125 aaaagaagat ttcttggtt tttgttaggt gttggatctg caatcgccag tggcgttgct 6120
126 gtatctaagg tcctgcaccc agaaggggaa gtgaacaaga tcaaaggatgc tctactatcc 6180
127 acaaacaagg ctgttagtcag cttatcaat ggagtttagtg ttttaaccag caaagtgtta 6240
128 gacctcaaaa actatataga taaacaattt ttaccttattg tgaacaagca aagctgcagc 6300
129 atatcaaata tagaaactgt gatagagttc caacaaaaga acaacagact actagagatt 6360
130 accagggaaat ttatgttaa tgcaggcgta actacacctg taagcaactt catgttaact 6420
131 aatagtgaat tattgtcatt aatcaatgtat atgcctataaa caaatgtca gaaaaagtt 6480
132 atgtccaaca atgttcaaat agtagacag caaagttaact ctatcatgtc cataataaaa 6540
133 gaggaagtct tagcatatgt agtacaatta ccactatatg gtgttataga tacaccctgt 6600
134 tggaaaactac acacatcccc tctatgtaca accaacacaa aagaagggtc caacatctgt 6660
135 ttaacaagaa ctgacagagg atggtaactgt gacaatgcag gatcgtatc tttcttccca 6720
136 caagctgaaa catgtaaagt tcaatcaat cgagtattt gtgacacaat gaacagttt 6780
137 acattaccaa gtgaagttaa tctctgcaat gttgacatata tcaaccccaa atatgattgt 6840
138 aaaattatga cttcaaaaaac agatgttaagc agtccgtta tcacatctct aggagccatt 6900
139 gtgtcatgt atggcaaaaac taaatgtaca gcatccaata aaaatcgtgg aatcataaaag 6960
140 acattttcta acgggtgcga ttatgtatca aataaaagggg tggacactgt gtctgttaggt 7020
141 aacacattat attatgtaaa taagcaagaa ggtaaaagtc tctatgtaaa aggtgaacca 7080
142 ataataaaatt tctatgaccc attagtattc ccctctgtatc aatttgcatgc atcaatatact 7140
143 caagtcaacg agaagattaa ccagacccata gcatttattt gtaaatccga tgaattattt 7200
144 cataatgtaa atgctggtaa atccaccaca aatatcatga taactactat aattatagt 7260

PAGE: 4

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/291,894DATE: 04/28/1999
TIME: 08:47:55

Input Set: I291894.RAW

145 attatagtaa tattgttac attaattgct gttggactgc tcttatactg taaggccaga 7320
146 agcacaccag tcacactaag caaagatcaa ctgagtggta taaataatat tgcatttagt 7380
147 aactaaataa aaatagcacc taatcatgtt cttacaatgg tttactatct gctcatagac 7440
148 aaccatctg tcattggatt ttcttaaaat ctgaacttca tcgaaactct catctataaa 7500
149 ccatctcact tacactattt aagtagattc ctatgttata gttatataaa acacaattgc 7560
150 atgccagatt aacttaccat ctgtaaaaat gaaaaactggg gcaaataatgt cacgaaggaa 7620
151 tccttgcaaa tttgaaattc gaggtcattt cttaaatggt aagaggtgtc atttttagtca 7680
152 taattatTTT gaatggccac cccatgcact gcttgcataa caaaacttta tgtaaacag 7740
153 aatacttaag tctatggata aaagtataga taccttatca gaaataagtg gagctgcaga 7800
154 gttggacaga acagaagagt atgctcttgg ttagttgga gtgctagaga gttatataagg 7860
155 atcaataaaac aatataacta aacaatcagc atgtgttgc atgagcaaac tcctcactga 7920
156 actcaatagt gatgatatca aaaagctgag ggacaatgaa gagctaaattt caccataagat 7980
157 aagagtgtac aatactgtca tatcatatat tggaaagcaac aggaaaaaca ataaacaaac 8040
158 tatccatctg ttaaaaagat tgccagcaga cgtagtggaa aaaacccatca aaaacacatt 8100
159 ggatatccat aagagcataa ccatcaacaa cccaaaagaa tcaactgtt tgatataaaa 8160
160 tgaccatgcc aaaaataatg atactacctg acaaataatcc ttgttagtata acttccatac 8220
161 taataacaag tagatgtaga gttactatgt ataataaaaaa gaacacacta tatttcaatc 8280
162 aaaacaaccc aaataaccat atgtactcac cgaatcaaac attcaatgaa atccattgga 8340
163 cctctcaaga attgattgac acaattcaaa attttctaca acatcttagt attattgagg 8400
164 atatataatac aataatataata ttagtgtcat aacactcaat tctaacaactc accacatcgt 8460
165 tacattatta attcaaaacaa ttcaagttgt gggacaaaat ggatcccatt attaatggaa 8520
166 attctgcataa tgtttatcta accgatagtt attaaaaagg tgtagtctt ttctcagagt 8580
167 gtaatgcattt aggaagttac atattcaatg gtccttatct caaaaatgtat tataccaact 8640
168 taatttagtag acaaaaatcca ttaatagaac acatgaatct aaagaaaacta aatataacac 8700
169 agtccttaat atctaagtat cataaagggtg aaataaaaattt agaagaacactt acttattttc 8760
170 agtcattact tatgacatac aagagtatga ctcgtcaga acagattgct accactaattt 8820
171 tactttaaaa gataataaga agagctatag aaataagtga tgtcaagtc tatgtatata 8880
172 tgaataaaact agggctaaaa gaaaaggaca agattaaatc caacaatggaa caagatgaag 8940
173 acaactcagt tattacgacc ataataaaat atgatataact ttcaagttgtt aaagataatc 9000
174 aatctcatct taaagcagac aaaaatcact ctacaaaaca aaaagacaca atcaaaaacaa 9060
175 cactcttgaa gaaatttgatg tgtagtcaatgc aacatcctcc atcatggta atacatttgtt 9120
176 ttaacttata cacaatataa aacaacatata taacacagta tcgatcaaattt gaggtaaaaa 9180
177 accatgggtt tacattgtata gataatcaaa ctcttagtgg atttcaattt attttgaacc 9240
178 aatatgggtt tatagtttat cataaggaac tcaaaaagaat tactgtgaca acctataatc 9300
179 aattcttgac atggaaagat attagcctt tgtagattttt tgtagtggta attacatgga 9360
180 ttagtaactg cttgaacaca ttaataaaa gcttaggctt aagatgcggaa ttcaataatg 9420
181 ttatcttgac acaactattt cttatggag attgtataact aaagctattt cacaatgagg 9480
182 ggtagtctacat aataaaaagag tgtagggat ttattatgtc tctaattttt aatataacac 9540
183 aagaagatca attcagaaaaa cgattttata atagtagtgc caacaacatc acagatgcgt 9600
184 ctaataaaagc tcagaaaaat ctgctatcaa gaggatgtca tacattatta gataagacag 9660
185 tgcgtccataa tataataataat ggcagatggaa taattcttattt aagtagttc tctaattttt 9720
186 ttaagcttgc aggtgacaat aaccttaaca atctgatgtca actataatttt tgtagtggaa 9780
187 tatttggaca cccatggta gatgaaagac aagccatggta tgctgtttt attaattgca 9840
188 atgagaccaa attttacttg ttaagcgtc tgtagtggat aagaggtgtc ttatgtatata 9900
189 gaattataaa agggtttggta aataattaca acagatggcc tactttaaaga aatgtatattt 9960
190 ttttaccctt aagatggta attactata aactaaacac ttatcttctt tgtagtggaa 10020
191 ttacagaaaaag agatggatt tgtagtgc gactacgttt ctatcgatgtc ttatcgatgtc 10080
192 ctaaaaaaaatggatcttgcataa atgattataa atgataaaac tatatcactt cttttttttttt 10140
193 tgatatggac tagttccctt agaaattaca tgccatcaca cataaaaaac tatatagaac 10200
194 atgaaaaattt aaaaattttcc gagagtgtata aatcaagaag agtatttagag tattttttttttt 10260

PAGE : 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/291,894DATE: 04/28/1999
TIME: 08:47:55

Input Set: I291894.RAW

195 gagataacaa attcaatgaa tgtgatttat acaaactgtgt agttaatcaa agttatctca 10320
196 acaaccctaa tcatgtggta tcattgacag gcaaagaaaag agaactcagt gtaggtagaa 10380
197 tgtttgcata gcaaccggga atgttcagac aggttcaaat attggcagag aaaatgatag 10440
198 ctgaaaacat tttacaattc tttcctgaaa gtcttacaag atatggtgat ctagaactac 10500
199 aaaaaatatt agaactgaaa gcaggaataa gtaacaatc aaatcgctac aatgataatt 10560
200 acaacaatta cattagtaag tgctctatca tcacagatct cagcaaattc aatcaagcat 10620
201 ttgcataatga aacgtcatgt atttgcgtg atgtgctgaa tgaactgcgt ggtgtacaat 10680
202 ctctattttc ctggttacat ttaactattc ctcatgtcac aataatatgc acatataaggc 10740
203 atgcacccccc ctatataggaa gatcatattt tagatcttaa caatgttagat gaacaaagtg 10800
204 gattatatacg atatcacatg ggtggcatcg aagggtgggt tcaaaaaacta tggaccatag 10860
205 aagctatatac actattggat ctaatatctc tcaaaggaa attctcaatt actgctttaa 10920
206 ttaatggtga caatcaatca atagatataa gcaaaccat cagactcatg gaaggtaaaa 10980
207 ctcatgctca agcagattat ttgcttagcat taaatagccct taaattactg tataaaagagt 11040
208 atgcaggcat aggccacaaa taaaaggaa ctgagactta tatatacga gatatgcaat 11100
209 ttatgagtaa aacaattcaa cataacggtg tatattaccc agctagtata aagaaagtcc 11160
210 taagagtggg accgtggata aacactatac ttgatgattt caaagtgagt ctgaatcta 11220
211 taggtatgtt gacacaagaa tttagatata gaggtgaaag tctattatgc agttaatat 11280
212 ttagaaatgt atggttatataat aatcagattt ctctacaatt aaaaaatcat gcattatgta 11340
213 acaataaaact atattttggac atattaaagg ttctgaaaca cttaaaaacc ttttttaatc 11400
214 ttgataatataat tgatacagca ttaacattgt atatgaattt accatgtta tttgggtggg 11460
215 gtgatcccaa ctgttataat cgaagttct atagaagaac tcctgacttc ctcacagagg 11520
216 ctatagttca ctctgttttc atacttagtt attatacaaa ccatgactta aaagataaac 11580
217 ttcaagatct gtcagatgtat agattgaaata agttcttaac atgcataatc acgtttgaca 11640
218 aaaaccctaa tgctgaattc gtaacattga tgagagatcc tcaagttta gggctgaga 11700
219 gacaagctaa aattacttagc gaaatcaata gactggcagt tacagaggtt ttgagtagcag 11760
220 ctccaaacaa aatattctcc aaaagtgcac aacattatac tactacagag atagatctaa 11820
221 atgatattat gaaaaatataa gAACCTACAT atcctcatgg gctaagagtt gtttatgaaa 11880
222 gtttaccctt ttataaagca gagaaaatag taaatcttat atcaggtaca aaatctataa 11940
223 ctaacataact ggaaaaaaact tctgccatag acttaacaga tattgataga gccactgaga 12000
224 tgatgaggaa aaacataact ttgcttataa ggatacttcc attggattgt aacagagata 12060
225 aaagagagat attgagtagt gaaaacctaa gtattactga attaagcaaa tatgttaggg 12120
226 aaagatottg gtcttatcc aatatagttg gtgttacatc acccagtatc atgtatacaa 12180
227 tggacatcaa atatactaca agcactatataat ctgtggcat aattatagag aaatataatg 12240
228 ttaacagttt aacacgtggt gagagaggac ccactaaacc atgggtggg tcatctacac 12300
229 aagagaaaaa aacaatgcca gtttataata gacaagtctt aaccaaaaaa cagagagatc 12360
230 aaatagatct attagcaaaa ttggatggg tttatgcattc tatagataac aaggatgaat 12420
231 tcatttgcata actcagcata ggaacccttg ggttaacata tgaaaaggcc aagaaattat 12480
232 ttccacaata tttaagtgtc aattatttgc atcgccttac agtcaatgtt agaccatgt 12540
233 aattccctgc atcaatacca gtttataaa caacaaatata tcacttgc actagcccta 12600
234 tttaatcgcat attaacagaa aagtatgtt atgaagatataat tgacatgtt tttccaaaact 12660
235 gtataagctt tggccttagt ttatgtcgt tagtagaaca atttactataat gtatgtccta 12720
236 acagaattat tctcataatc aagcttaatgt agatacattt gatgaaacct cccatattca 12780
237 caggtgttgt tgatattcac aagttaaaac aagtgtatca aaaacagcat atgttttac 12840
238 cagacaaaat aagtttgcact caatatgtgg aattatttctt aagtaataaa acactcaat 12900
239 ctggatctca ttgttaattctt aattttatataat tggcacataa aatatctgac tattttcata 12960
240 atacttacat tttaagtactt aatttagctg gacattggat tctgattata caacttata 13020
241 aagattctaa aggtatTTT gaaaaagatt ggggagaggg atatataact gatcatatgt 13080
242 ttattttttt gaaagttttc ttcaatgtt ataaagaccta tctctgtgt tttcataaaag 13140
243 gttatggcaa agcaaagctg gagtgtgata tgaacacttc agatctcta tttgtattgg 13200
244 attaataga cagtagttat tggaaatcttca ttgtctaaatggtt attttttagaa caaaaagtta 13260

PAGE: 6

VERIFICATION SUMMARY
PATENT APPLICATION US/09/291,894

DATE: 04/28/1999
TIME: 08:47:55

Input Set: I291894.RAW

Line ? Error/Warning

Original Text
